

REMARKS

Claims 1-8 were examined and reported in the Office Action. Claims 1-8 stand rejected. Applicants amend the title and claims 1, 3, and 6. Applicants respectfully request reconsideration of pending claims 1-8, as amended, in view of at least the following remarks.

I. Objections

The Patent Office objects to claim 3 for including "of claim of claim 2." Applicants have amended claim 3 as suggested by the Patent Office and asserts that claim 3 is proper. Thus, Applicants respectfully request that the Patent Office withdraw the objection to claim 3 noted above.

The Patent Office objects to the title as not descriptive of the invention. Applicants amend the title and assert that the title, as amended, is clearly indicative of the invention to which the claims are directed. Hence, Applicants respectfully request that the Patent Office withdraw the objection to the title noted above.

II. Claims Rejected Under 35 U.S.C. §102

Claims 1-4 and 6-7 are rejected under 35 U.S.C. §102(a) as being anticipated by U.S. Patent No. 6,001,685 issued to Kim ("Kim"). It is axiomatic that to be anticipated, every element of a claim must be disclosed within a single reference.

Applicants respectfully disagree with the rejection of independent claim 1 and submit that claim 1, as amended, is allowable for at least the reason that Kim does not describe "depositing a thermally conducting non-electrical conducting material over said transistor structure, wherein said thermally conducting non-electrical conducting material has a thermal conductivity greater than 0.185 W/cmK," as required by amended independent claim 1. Specifically, according to amended claim 1, for example, a non-electrical conducting having a thermal conductivity greater than 0.185 W/cmK may be deposited over a transistor structure with dielectric spacer portions adjacent top surface and opposing side surfaces of a gate.

On the other hand, Kim describes a method of making a metal oxide semiconductor field effect transistor (MOSFET) having a structure capable of obtaining an increased alignment margin for a mask without any increase in the area of the semiconductor device by forming a contact plug electrically insulated from a gate electrode but in electrical contact with the drain, and a contact pad electrically insulated from the gate electrode but in electrical contact with the source. (See Abstract; and col. 3, lines 8-19) Specifically, the electrical insulation is provided by insulating materials, such as electrically insulating film 30, which may be a Boro-phospho-silicate glass (BPSG) (insulating films 30 corresponds to insulating film 10, see column 4 lines 61-62); and electrically insulating film 34 (insulating films 34 corresponds to insulating film 14, see column 5, lines 33-34).

Consequently, the Patent Office has not identified and Applicants are unable to find any description in Kim of depositing a thermally conducting non-electrical conducting material has a thermal conductivity greater than 0.185 W/cmK over a transistor structure with dielectric spacer portions adjacent top surface and opposing side surfaces of a gate, as required by Applicants' amended claim 1. Hence, applicants respectfully request the Patent Office withdraw the rejection identified above for amended claim 1.

Applicants submit that dependent claims 2-4 being dependent upon allowable base claim 1, as amended, are patentable over the cited references for at least the reasons explained above. Thus, Applicants respectfully request that the Patent Office withdraw the rejection of dependent claims 2-4 under 35 U.S.C. § 102(a) as being anticipated by Kim.

Applicants respectfully disagree with the rejection above with respect to independent claim 6 and submit that independent claim 6, as amended, is allowable for at least the reason that Kim does not describe "depositing a thermally conducting non-electrical conducting material over said transistor structure, wherein said thermally conducting non-electrical conducting material has a thermal conductivity greater than 0.185 W/cmK," as required by amended independent claim 1. The argument above for amended claim 1, applies to claim 6 as amended, as well.

Specifically, the Patent Office has not identified and Applicants are unable to find any description in Kim of depositing a thermally conducting non-electrical conducting material has a thermal conductivity greater than 0.185 W/cmK over a transistor structure with dielectric spacer portions adjacent top surface and opposing side surfaces of a gate, as required by Applicants' amended claim 6. Hence, applicants respectfully request the Patent Office withdraw the rejection identified above for amended claim 6.

Applicants submit that dependent claim 7 being dependent upon allowable base claim 6, as amended, are patentable over the cited references for at least the reasons explained above. Thus, Applicants respectfully request that the Patent Office withdraw the rejection of dependent claim 7 under 35 U.S.C. § 102(a) as being anticipated by Kim.

III. Claims Rejected Under 35 U.S.C. §103

Claims 5 and 8 are rejected under 35 U.S.C. §103(a) as being unpatentable over Kim as applied to claims 1-4 and 6-7 above, and further in view of U. S. Patent 5,683,939 issued to Schrantz et al. ("Schrantz").

Applicants submit that dependent claims 5 and 8 being dependent upon allowable base claims 1 and 6 respectively, as amended, are patentable over the cited references for at least the reasons explained above. Thus, Applicants respectfully request that the Patent Office withdraw the rejection of dependent claims 5 and 8 under 35 U.S.C. § 103(a) as being unpatentable over Kim as applied to claims 1-4 and 6-7 above, and further in view of Schrantz.

CONCLUSION

In view of the foregoing, it is believed that all claims now pending (1) are in proper form, (2) are neither obvious nor anticipated by the relied upon art of record, and (3) are in condition for allowance. A Notice of Allowance is earnestly solicited at the earliest possible date. If the Examiner believes that a telephone conference would be useful in moving the application forward to allowance, the Examiner is encouraged to contact the undersigned at (310) 207-3800.


If necessary, the Commissioner is hereby authorized in this, concurrent and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2666 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17, particularly, extension of time fees.

Respectfully submitted,

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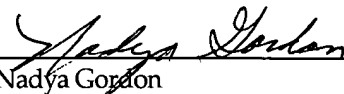
Dated: 7/26/04

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I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail with sufficient postage in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P. O. Box 1450, Alexandria, Virginia 22313-1450 on 7/26/04.

 7/26/04
Nadya Gordon Date